

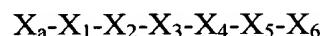
**AMENDMENTS TO THE CLAIMS**

Please amend claims 3-5 as follows:

1. **(Cancelled)**

2. **(Cancelled)**

3. **(Currently amended)** An anti-inflammatory compound comprising the following structure:



wherein

$X_a$  is a membrane translocation domain comprising from 6 to 15 amino acid residues;

$X_1$  is Leu, Ala, Ile L, A, I or nor-leucine (Nle);

$X_2$  is Asp, Glu, Asn, Gln D, E, N, Q, homoserine (Hser) or 2-ketopropylalanine (2-ketopropyl-A);

$X_3$  is Trp, Phe, Tyr W, F, Y, 4-biphenyl-alanine (Bpa), homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), or cyclohexyl-alanine (Cha);

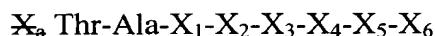
$X_4$  is Ser, Ala, Glu, Leu, Thr S, A, E, L, T, nor-leucine (Nle), or homoserine (Hser);

$X_5$  is Trp, His W, H, homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), O-benzyl serine (SeroBn), or 3-Pyridylalanine (3-Pal); and

$X_6$  is Leu, Ala, Ile L, A, I, or nor-leucine (Nle),

wherein the anti-inflammatory compound is less than 100 amino acids in length.

4. **(Currently amended)** An anti-inflammatory compound comprising the following structure:



wherein

$X_a$  is Thr, Ala;

$X_1$  is Leu, Ala, Ile L, A, I or nor-leucine (Nle);

$X_2$  is Asp, Glu, Asn, Gln D, E, N, Q, homoserine (Hser) or 2-ketopropylalanine (2-ketopropyl-A);

$X_3$  is Trp, Phe, Tyr W, F, Y, 4-biphenyl-alanine (Bpa), homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), or cyclohexyl-alanine (Cha);

$X_4$  is Ser, Ala, Glu, Leu, Thr ~~S, A, E, L, T~~, nor-leucine (Nle), or homoserine (Hser);

$X_5$  is Trp, His ~~W, H~~, homophenylalanine (Hphe), 2-Naphthylalanine (2-Nal), 1-Naphthylalanine (1-Nal), O-benzyl serine (SeroBn), or 3-Pyridylalanine (3-Pal); and

$X_6$  is Leu, Ala, Ile ~~L, A, I~~, or nor-leucine (Nle),

wherein the anti-inflammatory compound is less than 100 amino acids in length.

**5. (Currently amended)** The anti-inflammatory compound of claim 3, further comprising the variable  $X_7$  immediately C-terminal to  $X_6$ , wherein  $X_7$  is the amino acid sequence Gln-Thr-Glu ~~QTE~~.

**6. (Previously presented)** The anti-inflammatory compound of claim 3, wherein said compound comprises a sequence selected from the group consisting of Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:28), Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:29), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:30), Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:31), Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:32), Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:33), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:34), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln (SEQ ID NO:35), Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:36), Leu-Asp-Trp-Ser-Trp-Leu-Gln (SEQ ID NO:37), Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:38), Ala-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:39), Leu-Asp-Trp-Ser-Trp-Ala (SEQ ID NO:40), Ala-Asp-Trp-Ser-Trp-Ala (SEQ ID NO:41), Leu-Asp-Phe-Ser-Trp-Leu (SEQ ID NO:42), Leu-Asp-Tyr-Ser-Trp-Leu (SEQ ID NO:43), Leu-Asp-Trp-Ala-Trp-Leu (SEQ ID NO:44), Leu-Asp-Trp-Glu-Trp-Leu (SEQ ID NO:45), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:46), Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:47), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:48), Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:49), Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:50), Ala-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:51), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:52), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln (SEQ ID NO:53), Ala-Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:54), Ala-Asp-Trp-Ser-Trp-Leu-Gln (SEQ ID NO:55), Ala-Asp-Trp-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:56), Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu (SEQ ID NO:57), Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu (SEQ ID NO:58), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Ala (SEQ ID NO:59), Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu (SEQ ID NO:60), Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu (SEQ ID NO:61), Leu-Asp-Trp-Ser-Trp-Ala (SEQ ID NO:62), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr (SEQ ID NO:63), Thr-Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln (SEQ ID NO:64), Ala-Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr (SEQ ID NO:65), Leu-Asp-Trp-Ser-Trp-Ala-Gln (SEQ ID NO:66), Leu-Asp-Trp-Ser-Trp-Ala-Gln-Thr (SEQ ID NO:67), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu (SEQ ID NO:68), Ala-Asp-Trp-Ser-

Trp-Ala-Gln-Thr-Glu (SEQ ID NO:69), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala (SEQ ID NO:70), Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu (SEQ ID NO:71), Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr-Glu (SEQ ID NO:72), Ala-Asp-Trp-Ser-Trp-Ala (SEQ ID NO:73), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr (SEQ ID NO:74), Thr-Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln (SEQ ID NO:75), Ala-Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr (SEQ ID NO:76), Ala-Asp-Trp-Ser-Trp-Ala-Gln (SEQ ID NO:77), Ala-Asp-Trp-Ser-Trp-Ala-Gln-Thr (SEQ ID NO:78), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:79), Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:80), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu (SEQ ID NO:81), Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:82), Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:83), Leu-Asp-Phe-Ser-Trp-Leu (SEQ ID NO:84), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:85), Thr-Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln (SEQ ID NO:86), Ala-Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:87), Leu-Asp-Phe-Ser-Trp-Leu-Gln (SEQ ID NO:88), Leu-Asp-Phe-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:89), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:90), Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:91), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu (SEQ ID NO:92), Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:93), Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:94), Leu-Asp-Tyr-Ser-Trp-Leu (SEQ ID NO:95), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:96), Thr-Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln (SEQ ID NO:97), Ala-Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:98), Leu-Asp-Tyr-Ser-Trp-Leu-Gln (SEQ ID NO:99), Leu-Asp-Tyr-Ser-Trp-Leu-Gln-Thr (SEQ ID NO:100), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:101), Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:102), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu (SEQ ID NO:103), Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:104), Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:105), Leu-Asp-Trp-Ala-Trp-Leu (SEQ ID NO:106), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr (SEQ ID NO:107), Thr-Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln (SEQ ID NO:108), Ala-Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr (SEQ ID NO:109), Leu-Asp-Trp-Ala-Trp-Leu-Gln (SEQ ID NO:110), Leu-Asp-Trp-Ala-Trp-Leu-Gln-Thr (SEQ ID NO:111), Thr-Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:112), Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:113), Thr-Ala-Leu-Asp-Trp-Glu-Trp-Leu (SEQ ID NO:114), Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:115), Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:116), Leu-Asp-Trp-Glu-Trp-Leu (SEQ ID NO:117), Thr-Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr (SEQ ID NO:118), Thr-Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln (SEQ ID NO:119), Ala-Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr (SEQ ID NO:120), Leu-Asp-Trp-Glu-Trp-Leu-Gln (SEQ ID NO:121), and Leu-Asp-Trp-Glu-Trp-Leu-Gln-Thr (SEQ ID NO:122).

7. **(Previously presented)** The anti-inflammatory compound of claim 3, wherein X<sub>a</sub> consists of 6-12 amino acid residues.

8. **(Previously presented)** The anti-inflammatory compound of claim 3, wherein X<sub>a</sub> consists of 6-10 amino acid residues.

9. **(Previously presented)** The anti-inflammatory compound of claim 3, wherein X<sub>a</sub> comprises at least five basic amino acid residues.

10. **(Previously presented)** The anti-inflammatory compound of claim 7, wherein X<sub>a</sub> comprises at least five amino acid residues independently selected from L-Arginine, D-Arginine, L-Lysine and D-Lysine.

11. **(Previously presented)** The anti-inflammatory compound of claim 3, wherein X<sub>a</sub> is selected from the group consisting of Arg-Arg-Met-Lys-Trp-Lys-Lys (SEQ ID NO:123), Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg (SEQ ID NO:124), D-Tyr-D-Gly-D-Arg-D-Lys-D-Lys-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Arg (SEQ ID NO:125), Tyr-Ala-Arg-Lys-Ala-Arg-Arg-Gln-Ala-Arg-Arg (SEQ ID NO:126), D-Tyr-D-Ala-D-Arg-D-Lys-D-Ala-D-Arg-D-Arg-D-Gln-D-Ala-D-Arg-D-Arg (SEQ ID NO:127), Tyr-Ala-Arg-Ala-Ala-Arg-Arg-Ala-Ala-Arg-Arg (SEQ ID NO:128), D-Tyr-D-Ala-D-Arg-D-Ala-D-Arg-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg (SEQ ID NO:129), D-Arg-D-Arg-D-Met-D-Lys-D-Trp-D-Lys-D-Lys (SEQ ID NO:130), Arg-Arg-Arg-Arg-Arg-Arg (SEQ ID NO:149), Arg-Arg-Arg-Arg-Arg-Arg-Arg (SEQ ID NO:150), Arg-Arg-Arg-Arg-Arg-Arg-Arg (SEQ ID NO:151), Arg-Arg-Arg-Arg-Arg-Arg-Arg (SEQ ID NO:152), Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg (SEQ ID NO:153), Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg-Arg (SEQ ID NO:154), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg (SEQ ID NO:155), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg (SEQ ID NO:156), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg (SEQ ID NO:157), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg (SEQ ID NO:158), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg (SEQ ID NO:159), and D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg (SEQ ID NO:160).

12. **(Previously presented)** An anti-inflammatory compound comprising an amino acid sequence selected from the group consisting of Arg-Arg-Met-Lys-Trp-Lys-Lys-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:131), D-Arg-D-Arg-D-Met-D-Lys-D-Trp-D-Lys-D-Lys-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:132), Tyr-Gly-Arg-

Lys-Lys-Arg-Gln-Arg-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:133), D-Tyr-D-Gly-D-Arg-D-Lys-D-Lys-D-Arg-D-Gln-D-Arg-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:134), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:135), Arg-Arg-Arg-Arg-Arg-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:136), Tyr-Ala-Arg-Lys-Ala-Arg-Arg-Gln-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:137), D-Tyr-D-Ala-D-Arg-D-Lys-D-Ala-D-Arg-D-Gln-D-Ala-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:138), Tyr-Ala-Arg-Ala-Ala-Arg-Arg-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:139), D-Tyr-D-Ala-D-Arg-D-Ala-D-Ala-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:140), Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:141), D-Tyr-D-Gly-D-Arg-D-Lys-D-Lys-D-Arg-D-Arg-D-Gln-D-Arg-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu (SEQ ID NO:142), Arg-Arg-Met-Lys-Trp-Lys-Lys-Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:143), D-Arg-D-Arg-D-Met-D-Lys-D-Trp-D-Lys-D-Lys-Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:144), D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:145), Tyr-Ala-Arg-Ala-Ala-Arg-Arg-Ala-Ala-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:146), D-Tyr-D-Ala-D-Arg-D-Ala-D-Ala-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:147), and Arg-Arg-Arg-Arg-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu (SEQ ID NO:148).

13. **(Previously presented)** An anti-inflammatory compound comprising an amino acid sequence selected from the group consisting of

H-Arg-Arg-Met-Lys-Trp-Lys-Lys-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> (SEQ ID NO: 161);

H-Tyr-Gly-Arg-Lys-Lys-Arg-Gln-Arg-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> (SEQ ID NO: 162);

H-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> (SEQ ID NO: 163);

H-Tyr-Ala-Arg-Lys-Ala-Arg-Arg-Gln-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> (SEQ ID NO: 164);

H-Tyr-Ala-Arg-Ala-Ala-Arg-Arg-Ala-Ala-Arg-Arg-Thr-Ala-Leu-Asp-Trp-Ser-Trp-Leu-Gln-Thr-Glu-NH<sub>2</sub> (SEQ ID NO: 165);

H-Arg-Arg-Met-Lys-Trp-Lys-Lys-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> (SEQ ID NO: 166);

H-D-Arg-D-Arg-D-Met-D-Lys-D-Trp-D-Lys-D-Lys-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> (SEQ ID NO: 167);

H-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> (SEQ ID NO: 168);

H-Tyr-Ala-Arg-Ala-Ala-Arg-Arg-Ala-Ala-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> (SEQ ID NO: 169);

H-D-Tyr-D-Ala-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-D-Ala-D-Ala-D-Arg-D-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> (SEQ ID NO: 170); and

H-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-Gln-Arg-Arg-Arg-Leu-Asp-Trp-Ser-Trp-Leu-NH<sub>2</sub> (SEQ ID NO: 171).